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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,829	01/15/2004	Andrew A. Kostrzewski	2003-01	7135

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LEONARD TACHNER, A PROFESSIONAL LAW
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EXAMINER

HO, TUAN V

ART UNIT	PAPER NUMBER
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2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/758,829	KOSTRZEWSKI ET AL.	
	Examiner	Art Unit	
	Tuan V. Ho	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-12 and 14-22 is/are rejected.
- 7) ☒ Claim(s) 5 and 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 6-8, 9-11, 13-18 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Driscoll, Jr. et al (US 6,459,451).

With regard to claim 1, Driscoll, Jr. Discloses in Figs. 2A, 10 and 13A, the same method of providing a real-time panoramic video image in a rectangular format (the panoramic camera system as shown in Fig. 2A provides a real-time images in rectangular format as shown in Fig. 10, col. 4, lines 2-27 and col. 8, lines 46-53); the method comprising the steps of providing a panoramic annular lens system to capture a 360° viewed annular image (Fig. 2A, CCD 250, cols. 4, lines 1-65); focusing said 360° viewed annular image on a video camera image plane (lens 220); transferring a data signal output of said camera image plane to a personal computer (col. 9, lines 35-50); utilizing said personal computer to unwrap said annular image

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into a substantially distortion free rectangular image at a rate of at least 30 fps (computer system displays images at a rate of 30 fps); and presenting said rectangular image on a visual display (computer display).

With regard to claim 2, Driscoll, Jr. Discloses in Figs. 2A, 10 and 13A, the same method of providing a real-time panoramic video image in a rectangular format (the panoramic camera system as shown in Fig. 2A provides a real-time images in rectangular format as shown in Fig. 10, col. 4, lines 2-27 and col. 8, lines 46-53); the method comprising the steps of providing a hyperboloidal lens and ellipsoidal mirror (lenses 220 or 240 and mirror 210).

With regard to claim 3, Driscoll, Jr. Discloses in Figs. 2A, 10 and 13A, the same method of providing a real-time panoramic video image in a rectangular format (the panoramic camera system as shown in Fig. 2A provides a real-time images in rectangular format as shown in Fig. 10, col. 4, lines 2-27 and col. 8, lines 46-53); the method wherein in step b) providing said video camera comprises the step of providing a CCD image plane (CCD array, col. 4, lines 64-65).

With regard to claim 6, Driscoll, Jr. et al discloses the same vertex based transformation using graphics processing units of said personal computer (col. 9, lines 21-67).

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With regard to claim 7, Driscoll, Jr. et al discloses the same; capturing said data signal output; converting said video image from said data signal output; manipulating said converted video image; and rendering said image in Cartesian format (col. 9, lines 21-67 and col. 10).

With regard to claim 8, Driscoll, Jr. et al discloses the same at least one graphics card of said personal computer to unwrap said annular image (Figs. 3A and 3B and col. 8, lines 15-42).

Apparatus claims 9-11, 16-18 and 22 correspond to method claims 1-3 and 6-8 and are analyzed the same as previously discussed with respect to method claims 1-3 and 6-8.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

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claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4, 12, 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Driscoll et al.

With regard to claims 4, 12 and 19, Driscoll et al discloses closes the same subject matter as discussed with respect to claims 1-3 and 6-8, except for the CMOS image plane.

Official Notice is taken for a CMOS image sensor which is old and well known in the art; where the CMOS image sensor has advantages such as using less power than a CCD image sensor.

Therefore, Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to to replace the CCD image sensor of Driscoll et al with a CMOS image sensor in order to save battery power and easily to manufacture.

With regard to claims 20 and 21, Driscoll et al does not discloses any video camera sensing element has a pixel

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resolution of at least 1280 x 1024 and video camera sensing element has a pixel resolution of at least 720 x 480. However, Official Notice is taken for video resolutions of 1280 x1024 and 720 x 480 are well known to be used in HDTV and EDTV. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to the pixel resolution of Driscoll et al with the well known video resolutions of 1280 x1024 and 720 x 480 since the pixel resolution of 1280 x1024 and 720 x 480 would allow a user to display images on HDTV or EDTV signals.

3. Claims 5 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jackson et al (5,990,941) discloses an apparatus that includes a fisheye lens for taking an image at 180 degrees.

Kuroda et al (5,854,713) discloses a reflection type angle of view transforming optical apparatus.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUAN HO whose telephone number is (571) 272-7365. The examiner can normally be reached on Mon-Fri from 7AM to 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is (572) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service whose telephone number is (571) 272-2600.

A handwritten signature in black ink, appearing to read 'Tuan Ho', with a stylized flourish at the end.

TUAN HO

Primary Examiner

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